

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/38363

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 38/00, 39/00, 39/395; C12P 21/08

US CL : 530/300, 387.3; 424/185.1, 192.1, 134.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/300, 387.3; 424/185.1, 192.1, 134.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
stn, medline, genseq, pir

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/54805 A1 (UNIVERSITY OF MARYLAND, BALTIMORE) 21 September 2000 (21.09.00) entire article, especially page 8, line 5.	1-11, 18-19
X	WO 00/21560 A1 (LUDWIG INSTITUTE FOR CANCER RESEARCH) 20 April 2000 (20.04.00), see Figure 2C, amino acids 458-469 are 100% identical to SEQ ID NO:3; see pages 13, 17, 32, and 89-90	1-2, 4-6, 8-11, 18

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

23 June 2005 (23.06.2005)

Date of mailing of the international search report

22 SEP 2005

Name and mailing address of the ISA/US

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.: 1-11, 18-22 (SEQ ID NOs 1 & 3)
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☒

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

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BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group 1, Claims 1-11, and 18-22 as specifically drawn to the special technical feature of an agent that binds focal adhesion kinase wherein said agent comprises SEQ ID NO:1 and compositions thereof, and a method for inducing apoptosis in a cancer cell.

Group 2, Claims 1-11, and 18-22 as specifically drawn to the special technical feature of an agent that binds focal adhesion kinase wherein said agent comprises SEQ ID NO:3 and compositions thereof, and a method for inducing apoptosis in a cancer cell.

Group 3, Claims 23-31 as specifically drawn to the special technical feature of a vector that expresses the amino acids of SEQ ID NO:1 and chimerics thereof.

Group 4, Claims 23-31 as specifically drawn to the special technical feature of a vector that expresses the amino acids of SEQ ID NO:3 and chimerics thereof.

Group 5, Claims 12-17, 42-47, 34 as specifically drawn to the special technical feature of a method of treating cancer in a patient comprising administering a composition comprising SEQ ID NO:1 and or treating cancer with a chimeric fusion protein wherein the first domain of the fusion comprises SEQ ID NO:1.

Group 6, Claims 12-17, 42-47, 34 as specifically drawn to the special technical feature of a method of treating cancer in a patient comprising administering a composition comprising SEQ ID NO:3. or treating cancer with a chimeric fusion protein wherein the first domain of the fusion comprises SEQ ID NO:3.

Group 7, Claims 32-33, 35-41, drawn to the special technical feature of a method for treating cancer comprising administering a chimeric fusion protein to a patient wherein the protein comprises a first domain that binds to focal adhesion kinase molecules. The inventions listed as Groups 1-7 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking Groups 1-7 appears to be related to the focal adhesion kinase molecule. In particular, the technical feature is drawn to various agents that specifically bind the focal adhesion kinase and induces apoptosis in a cell that expresses focal adhesion kinase.

However, Golubovskaya *et al.* (Journal of Biological Chemistry, Vol. 277, No. 41, pages 38978-38987, October 2002) specifically teach an agent that induces apoptosis in cell that express focal adhesion kinase (FAK) by the addition of a peptide comprising the C-terminal domain (FAK-CD) of FAK, see abstract and page 38985.

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Therefore, the technical feature linking the inventions of Groups 1-7 does not constitute a special technical feature as defined by PCT Rule 13.2 as it does not define a contribution over the prior art.